



## The case for behavioural change counselling for the prevention of NCDs and improvement of self-management of chronic conditions

KM Murphy, R Mash & Z Malan

To cite this article: KM Murphy, R Mash & Z Malan (2016) The case for behavioural change counselling for the prevention of NCDs and improvement of self-management of chronic conditions, South African Family Practice, 58:6, 249-252, DOI: [10.1080/20786190.2016.1187885](https://doi.org/10.1080/20786190.2016.1187885)

To link to this article: <http://dx.doi.org/10.1080/20786190.2016.1187885>



© 2016 The Author(s). Open Access article distributed under the terms of the Creative Commons License [CC BY-NC 3.0]



Published online: 30 May 2016.



Submit your article to this journal [↗](#)



Article views: 684



View related articles [↗](#)



View Crossmark data [↗](#)

# The case for behavioural change counselling for the prevention of NCDs and improvement of self-management of chronic conditions

KM Murphy<sup>a\*</sup>, R Mash<sup>b</sup> and Z Malan<sup>b</sup>

<sup>a</sup>Department of Medicine, Chronic Disease Initiative for Africa (CDIA), University of Cape Town, Cape Town, South Africa

<sup>b</sup>Division of Family Medicine and Primary Care, Stellenbosch University, Stellenbosch, South Africa

\*Corresponding author, email: [katherine.murphy@uct.ac.za](mailto:katherine.murphy@uct.ac.za)

Brief behaviour change counselling (BBCC) that is integrated into routine health care has been shown to be effective in helping patients modify risk behaviours for non-communicable disease (NCD), improve self-management of chronic conditions, as well as produce clinically meaningful improvements in biological outcomes. Capacitating healthcare providers to effectively assist patients in lifestyle modification and self-management has been recognised by the South African Department of Health as an important strategic objective in its stated intention to 're-orientate' the primary health care system to prevent NCDs more effectively and improve the quality of care for chronic conditions. However, primary care providers in South Africa are currently poorly trained for behaviour change counselling. The University of Stellenbosch, in partnership with the Chronic Disease Initiative for Africa (CDIA), has recently developed a training course for doctors and nurses that is offered as a CPD accredited course every year at the university. In addition, a resource package has been produced, consisting of a training manual and comprehensive patient education materials on smoking, diet, alcohol and physical activity. The approaches to behaviour change counselling that are taught in this course and described in the manual are Motivational Interviewing (MI) and the 5 A's Clinical Practice Guideline.

**Keywords:** behaviour change, counselling, non-communicable diseases, self-management

## Introduction

### *Rationale for behaviour change counselling*

Unhealthy lifestyle-related behaviour is a key factor underlying much of the South African burden of disease and primary care morbidity. Chronic diseases such as HIV, TB, hypertension, diabetes, asthma and chronic obstructive pulmonary disease (COPD) all have significant underlying behavioural issues, namely sexual behaviour, adherence to treatment, tobacco smoking, alcohol and substance abuse, physical inactivity and unhealthy eating.

Brief behaviour change counselling (BBCC) that is integrated into routine healthcare has been shown to be effective in helping patients modify these risk behaviours, improve self-management of chronic conditions, as well as produce clinically meaningful improvements in biological outcomes (see Table 1).<sup>1,2</sup> Capacitating healthcare providers to effectively assist patients in lifestyle modification and self-management has been recognised by the South African Department of Health as an important strategic objective in its stated intention to 're-orientate' the primary health care system to more effectively prevent NCDs and improve the quality of care for chronic conditions.<sup>3</sup>

Whilst training providers at all levels in effective counselling skills is seen as necessary, primary health care personnel (nurses, doctors, health promoters and community health workers) are identified as having a particularly important role to play, given the potential for prevention and control of NCDs at this level of the system. The need to shift to a patient-centred approach to care, which emphasises the importance of actively engaging the patient in decision-making about his/her health, is seen as central to the implementation of a new model for chronic care.

## Discussion

### *Current situation in South Africa*

Currently, the capacity of South African primary care providers to educate and counsel patients on lifestyle modification is generally poor. For example, a local study found that only 20% of doctors, 15% of health promoters and 0% of nurses achieved excellent knowledge scores on the key issues.<sup>4</sup> This may well reflect the state of training in this area. A recent situational analysis of the training available for primary care nurses and doctors showed that existing training on the topic is woefully inadequate. Most training is very brief and theoretical and does not offer the opportunity for practice or constructive feedback. Skills in behaviour change counselling are also not reinforced throughout the curriculum or during clinical supervision, and are not routinely assessed.<sup>5</sup>

In addition to a lack of knowledge and skills, providers face a number of other barriers to the delivery of BBCC in our setting. These include language barriers, a lack of support and resources, as well as a lack of time and poor continuity of care in a system geared to provide care for acute episodic illness rather than ongoing care for chronic conditions.<sup>4</sup> Whilst training and ongoing support can demonstrably increase the ability of providers to do BBCC,<sup>6,7</sup> policy and health system changes aimed at enabling and incentivising clinicians to implement such interventions are critical to their widespread adoption. For example, there has been a remarkable increase in the treatment of tobacco dependence by clinicians in the United States, through the combination of measures taken by health insurers, professional bodies, health administrators and policy-makers.<sup>8</sup> Other strategies that support the integration of BBCC into routine care include: the provision of guidelines; risk assessment tools and prompts; patient educational resources and organisational

**Table 1:** Primary healthcare providers CAN make a difference

**Smoking:** Healthcare providers are effective in helping smokers quit by providing brief advice on how to quit, medical treatment for withdrawal symptoms (NRT) and referral to support services such as Quitlines. Patients report that what doctors say and do about smoking in the consultation makes a huge difference to their motivation to quit and increases the likelihood of long-term success<sup>22–24</sup>

**Risky alcohol use:** Brief counselling interventions in primary care settings and patient-centred counselling, such as Motivational Interviewing, are effective in reducing the overall level of alcohol consumption, changing harmful drinking patterns, preventing future drinking problems and improving health in people who are not heavily dependent on alcohol<sup>25–27</sup>

**Physical activity:** Patients increase their levels of physical activity in response to brief advice and print materials given by primary care clinicians. Longer counselling sessions and follow-up visits are also effective<sup>28</sup>

**Nutrition:** Low-intensity interventions by primary care providers of five minutes or less, supplemented by patient self-help materials, can increase the intake of fruits, vegetables and high fibre and reduce dietary fat intake. Medium-to-high-intensity counselling in either group or individual sessions by a nutritionist, dietitian or a specially trained primary care clinician has a larger effect. Ongoing support is necessary for successful, sustained weight loss<sup>29</sup>

strategies, such as the development of a strong teamwork approach, the delegation of tasks, the implementation of continuous quality-improvement processes and developing linkages with referral services.<sup>9,10</sup>

Whilst much still needs to be done in terms of training and organisational support to enable providers in South Africa to undertake BBCC, opportunities do currently exist for providers to enhance their knowledge of best practice and their skills in this area. The University of Stellenbosch, in partnership with the Chronic Disease Initiative for Africa (CDIA), has developed a training course for doctors and nurses that is offered as a continuous professional development (CPD) accredited course every year at the university. An evaluation of the training course has shown that primary care providers can successfully learn this new approach and implement it in their clinical practice, at least in the short term.<sup>6</sup>

We have also trained key personnel from the family medicine departments of every university in the country in an attempt to foster curriculum change in the tertiary training of healthcare providers. In addition, we have produced a resource package, consisting of a training manual and comprehensive patient education materials on smoking, diet, alcohol and physical activity. These resources have been made freely available at: <http://www.ichange4health.co.za>

The approaches to behaviour change counselling, which are taught in this course and described in the manual, are outlined below: these are Motivational Interviewing (MI)<sup>11</sup> and the 5 A's Clinical Practice Guideline.<sup>1</sup> Both are evidence-based approaches that are currently being widely used and promoted as current best practice in the field.

### Motivational interviewing

MI was originally used by psychotherapists in the field of substance abuse, but has since been successfully adapted and simplified into a generic and feasible method to address the challenge of brief behavioural change consultations in the context of primary care.<sup>12</sup>

MI varies significantly from the prescriptive, advice-giving approach typically used in medical consultations, which casts the provider in a dominant, directing role and the patient as a passive recipient of his/her expertise. Whilst this may be appropriate for certain situations, it is less suitable for consultations with patients who have lifestyle-related chronic conditions or risk factors. In this situation, the patient becomes the principal caregiver: they need to make choices and decisions about how they will manage their health in the long term and in the context of their particular life circumstances. To quote

Bodenheimer *et al.*, 'each day, it is the patients who decide what they are going to eat, whether they will exercise and to what extent they will take their prescribed medication'.<sup>13</sup> In MI, the role of the provider is to skilfully guide the patient to consider change and to offer support and assistance, rather than to try and compel change. It is suggested that motivation for change is more likely if the provider elicits arguments for change from the patients themselves, helps them articulate and resolve their feelings of ambivalence about change and builds self-efficacy. A key characteristic of this 'guiding style' is an empathetic therapeutic approach, which emphasises active listening in order to understand the patient's perspective and experiences. MI posits that actively engaging the patient in decision-making and respecting patient choice and autonomy serves to minimise resistance to change and enhance intrinsic motivation.<sup>12</sup>

A recent meta-analysis of 48 studies that employed MI in general medical settings reported that MI has an odds ratio of 1.55 (95% confidence interval: 1.40–1.71, *p*-value < 0.001), suggesting a 55% increased chance of producing a positive outcome relative to comparison interventions.<sup>14</sup> This finding is similar to the ORs found in other general reviews of MI.<sup>14</sup> MI has produced a statistically significant, positive and durable impact on a range of outcome measures relevant to chronic diseases, including death rate, blood pressure, cholesterol levels, body weight, dangerous drinking, smoking cessation, patient confidence, intention to change and engagement with care. The level of evidence for MI is deemed sufficiently strong to warrant the strongest level of recommendation (i.e. Class 1, Category A), reflecting a general consensus that the method is useful and effective.<sup>2</sup>

Becoming fully proficient in MI, however, involves a relatively large investment in training time. Competence in using open questions, reflective listening and how to elicit and respond to 'change talk' are essential skills to learn and opportunities for ongoing supervision and constructive feedback have proved to be important.<sup>7</sup>

Conceptually, MI may also not be that accessible for low- to mid-level health workers without a tertiary education. In the context of health services in low- and middle-income countries such as SA, which rely on lay counsellors, community health workers, health promoters and nurses to provide the bulk of health education and lifestyle counselling, adaptations of MI may be more appropriate.

### The 5 A's guideline

The 5 A's best practice guideline for brief behaviour change counselling in primary care is another approach that has a strong evidence base.<sup>1</sup> It has been widely used in smoking cessation, but it is currently recommended by a number of professional

bodies as an effective, general approach for engaging patients in behaviour change. These bodies include the Royal Australian College of GPs, the US and Canadian Task Forces on Preventive Health and the International Primary Care Respiratory Group. Its integration into primary care is being actively promoted in a number of different high-income countries.<sup>1,15,16</sup>

The content and intensity of each step in the 5 A's varies according to the specific behaviour, practice setting and the individual's readiness to change, but interventions targeting any behavioural risk can be organised with reference to the following five components:

- (1) **Ask:** ask about, assess and document behavioural risk factors.
- (2) **Advise:** provide clear information on risk and brief, personalised advice; express social support for change.
- (3) **Assess:** allow the individual to assess the personal relevance of information and determine readiness to change.
- (4) **Assist:** assist the patient in planning for change, acquiring behavioural skills and confidence to succeed; prompt the patient to seek social support; provide supplementary education and motivational materials and medical treatment, where appropriate.
- (5) **Arrange:** schedule follow-up contact to provide ongoing assistance and to adjust plan as needed; refer to specialised services (if necessary) and community-based resources.

Like MI, the accumulated evidence on behaviour-change interventions suggests that the 5 A's protocol is an effective approach with a moderate effect size.

In the most recent update of the 5 A's Clinical Practice Guideline,<sup>8</sup> the authors propose that a patient-centred approach, such as MI, is important in the delivery of the 5 A's. The authors of this opinion piece have taken up this suggestion and have devised a unique model for behaviour-change counselling that integrates the key principles of MI into the 5 A's guideline. We have also applied MI to group education activities, which more typically occur in the SA setting.

### **Adapted South African model for behaviour change counselling**

Several research studies have demonstrated the feasibility and effectiveness of group MI and the adapted 5 A's in our local context. These are briefly described below.

#### **Group motivational interviewing**

In 2011, Mash *et al.* developed and evaluated a group diabetes education programme, which aimed to address the self-management needs of diabetic patients attending public sector health services.<sup>17</sup> The intervention consisted of four group education/counselling sessions led by a health promoter with a variety of educational materials and tools for use in group activities. The health promoters were trained to deliver the content in a guiding style derived from motivational interviewing. One year later it was found that the programme had a significant and persistent effect on mean systolic and diastolic blood pressure, which was clinically significant. No significant improvements were found in other clinical outcomes. The qualitative process evaluation suggested that problems with patient attendance, finding a suitable venue and the full adoption of the guiding style on the part of the health promoters may have been important limiting factors. Despite these issues,

this group programme was found to be cost-effective in our setting (with an incremental cost-effectiveness ratio of \$1862 / Quality adjusted life years saved).<sup>18</sup>

A similar programme, implemented in the Eden district of the Eastern Cape, demonstrated significant behaviour change in relation to healthy eating, physical activity, foot care and perceived ability to share the information with others, immediately after the programme ended.<sup>19</sup>

Another group MI programme for asthma and COPD was also developed as part of the Asthma Guideline Implementation Project and evaluated in a participatory action research project in primary care.<sup>20</sup> The intervention succeeded in improving staff knowledge of asthma and patients' ability to understand and self-manage their condition. Improvements in the quality of care and outcomes for asthma were also associated with use of the group counselling and educational materials.

#### **5 A's using the guiding style**

With regard to an approach for individual behaviour change counselling, our model adapts the 5 A's protocol to ensure that each step is delivered in a patient-centred, guiding style. This approach has also been evaluated in the SA context in a quasi-experimental study aimed at helping pregnant women to stop smoking.<sup>21</sup> The 5 A's were delivered by both midwives, who initiated the process, and lay counsellors, who completed it, demonstrating that this brief approach can be divided between different members of the primary care team. The study found a significant effect on both smoking cessation and reduction, with about 20% of mothers benefiting from the intervention. Qualitative data indicated significant changes in perceived quality of antenatal care as a result of the intervention.

#### **Proposed model**

Primary care in SA needs to have a systematic and comprehensive approach to the education and counselling of patients with chronic diseases, particularly at the time of diagnosis. On the basis of this body of research, we propose a model that includes both group and individual approaches. Group activities can be a cost-effective means of educating and counselling groups of patients with specific chronic conditions. At the same time, patients need the opportunity for individual brief behaviour change counselling during the consultation to support self-management. Both interventions should be reinforced by appropriate patient education materials. Underpinning this model is the need for provider training in behaviour change counselling using the guiding style and its accompanying communication skills. Such training should be given greater status in undergraduate and postgraduate training programmes and offered as continuing professional development to those already qualified and in practice.

Furthermore, such initiatives should be supported by policy and organisational change so that the flow of patients with chronic diseases can be organised in such a way that patient education and counselling is built into routine care and accessible to all. Research on this aspect is needed and the authors are currently seeking funding for a pragmatic trial that will address these issues. A further area warranting local research is the role of community health workers in behaviour change counselling. Clearly there is potential for ward-based outreach teams to offer education, health promotion and counselling at the household level, but at this stage we are uncertain as to what can realistically be expected of community health workers in this regard.



## Conclusion

Primary care providers in South Africa are currently poorly trained for behaviour change counselling and there are many barriers to its successful delivery. Nevertheless, a successful approach has been developed and tested in the South African context. This approach needs to be considered for integration into policy and practice so that patients with chronic diseases and/or their risk factors are offered effective education and counselling within our health services, as well as appropriate self-help educational materials that they can take home.

To fully appreciate the importance of these types of interventions requires a true population-based perspective.<sup>1</sup> Behavioural counselling interventions that are feasible in healthcare settings often have only a modest impact on individual behaviour. For example, smoking cessation interventions in primary care can improve cessation by about 6–15% over usual care. Interventions targeting other behaviours have a similar effect. However, the limited impact of these types of interventions in primary care translates into significant benefits to the health of the population as a whole (and to multiple individuals) when they are systematically applied to a large proportion of those in need. If implemented widely, these interventions have the potential to achieve important reductions in chronic disease and to reduce associated, excess healthcare costs.<sup>1</sup>

## References

- Whitlock EP, Orleans CT, Pender N, et al. Evaluating primary care behavioral counseling interventions: an evidence-based approach. *Am J Prevent Med.* 2002;22(4):267–84.
- Artinian NT, Fletcher GF, Mozaffarian D, et al. Interventions to promote physical activity and dietary lifestyle changes for cardiovascular risk factor reduction in adults: a scientific statement from the American Heart Association. *Circulation.* 2010;122(4):406–41.
- Department of Health RoSA. Strategic plan for the prevention and control of non-communicable diseases, 2013–2017. Pretoria, SA2012. Available from: <http://www.hsrc.ac.za/uploads/pageContent/3893/NCDs%20STRAT%20PLAN%20%20CONTENT%208%20april%20proof.pdf>.
- Parker WA, Steyn NP, Levitt NS, et al. They think they know but do they? Misalignment of perceptions of lifestyle modification knowledge among health professionals. *Public Health Nutr.* 2011;14(08):1429–38.
- Malan Z, Mash B, Everett-Murphy K, et al. A situational analysis of training for behaviour change counselling for primary care providers South Africa. *Afr J Primary Health Care Fam Med.* 2015;7(1):10 p.
- Malan Z, Mash R, Everett-Murphy K, et al. Evaluation of a training programme for primary care providers to offer brief behaviour change counselling on risk factors for non-communicable diseases in South Africa. *Am J Preventive Med.* 2015;20(1):68–74.
- Emmons KM, Rollnick S. Motivational interviewing in health care settings opportunities and limitations. *Am J Prev Med.* 2001;20(1):68–74.
- Fiore M, Jaen CR, Baker T, et al. Treating tobacco use and dependence: 2008 update. US Public Health Service Clinical Practice Guideline Executive Summary. *Resp Care.* 2008;53(9):1217–22.
- Consortium KAftL. Lifescripts practice manual: supporting lifestyle risk factors management in general practice. Canberra: Commonwealth of Australia; 2005.
- Harris M. The role of primary health care in preventing the onset of chronic disease, with a particular focus on the lifestyle risk factors of obesity, tobacco and alcohol. Canberra: National Preventative Health Taskforce; 2008.
- Miller W, Rollnick S. Motivational interviewing: helping people change. New York, NY: Guilford Press; 2013.
- Rollnick S, Miller WR, Butler C, et al. Motivational interviewing in health care: helping patients change behavior. New York, NY: Guilford Press; 2008.
- Bodenheimer T, Lorig K, Holman H, et al. Patient self-management of chronic disease in primary care. *JAMA.* 2002;288(19):2469–75.
- Lundahl B, Moleni T, Burke BL, et al. Motivational interviewing in medical care settings: a systematic review and meta-analysis of randomized controlled trials. *Patient Educ Couns.* 2013;93(2):157–68.
- Goldstein MG, Whitlock EP, DePue J. Multiple behavioral risk factor interventions in primary care. *Am J Prev Med.* 2004;27(2):61–79.
- van Schayck O, Pinnock H, Ostrem A, et al. IPCRG Consensus statement: tackling the smoking epidemic — practical guidance for primary care. *Prim Care Respir J.* 2008;17(3):185–93.
- Mash R, Rhode H, Zwarenstein M, et al. Effectiveness of a group diabetes education programme in under-served communities in South Africa: a pragmatic cluster randomized controlled trial. *Diabetic Med.* 2014;31(8):987–93.
- Mash R, Kroukamp R, Gaziano T, et al. Cost-effectiveness of a diabetes group education program delivered by health promoters with a guiding style in underserved communities in Cape Town, South Africa. *Patient Educ Couns.* 2015;98:622–6.
- van der Does AM, Mash R. Evaluation of the 'Take Five School': an education programme for people with type 2 diabetes in the Western Cape, South Africa. *Prim Care Diabetes.* 2013;7(4):289–95.
- Mash B, Rhode H, Pather M, et al. Evaluation of the asthma guideline implementation project in the Western Cape, South Africa. *Curr Allergy Clin Immunol.* 2010;23(4):154–61.
- Everett-Murphy K, Steyn K, Mathews C, et al. The effectiveness of adapted, best practice guidelines for smoking cessation counseling with disadvantaged, pregnant smokers attending public sector antenatal clinics in Cape Town, South Africa. *Acta Obstet Gynecol Scand.* 2010;89(4):478–89.
- Cunningham M, Litt J, Zwar N, et al. Smoking cessation guidelines for Australian general practice. *Aust Fam Physician.* 2005;34(6):461–6.
- Aveyard P, West R. Managing smoking cessation. *BMJ.* 2007;335:37–41.
- Fiore MC, Jaen CR, Baker TB, et al. Treating tobacco use and dependence: 2008 update US Public Health Service Clinical Practice Guideline executive summary. *Respir Care.* 2008;53(9):1217–22.
- Jonas DE, Garbutt JC, Amick HR, et al. Behavioral counseling after screening for alcohol misuse in primary care: a systematic review and meta-analysis for the U.S. preventive services task force. *Ann Intern Med.* 2012;157(9):645–54.
- Vasilaki EI, Hosier SG, Cox WM. The efficacy of motivational interviewing as a brief intervention for excessive drinking: a meta-analytic review. *Alcohol Alcoholism.* 2006;41(3):328–35.
- Babor TF, Higgins-Biddle JC, Saunders JB, et al. AUDIT: the alcohol use disorders identification test: guidelines for use in primary care: Department of Mental Health and Substance Dependence. World Health Organization; 2001.
- Smith B. Promotion of physical activity in primary health care: update of the evidence on interventions. *J Sci Med Sport.* 2004;7(1):67–73.
- Pignone MP, Ammerman A, Fernandez L, et al. Counseling to promote a healthy diet in adults. *Am J Prev Med.* 2003;24(1):75–92.

Received: 01-12-2015 Accepted: 06-05-2016